IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Denman, et al.	§		
		§		
Serial No.:	10/028,086	§	Group Art Unit:	2661
		§		
Filed:	December 21, 2001	§	Examiner:	Unknown
		§		
For:	PUSH-TO-TALK WIRELESS TELECOMMUNICATIONS SYSTEM UTILIZING A VOICE-OVER-IP NETWORK	§		

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to the initial examination of the above-identified application, please amend the application as follows:

IN THE SPECIFICATION

Please insert the following paragraph on Page 1 before BACKGROUND OF THE INVENTION:

This application claims the benefit of the U.S. Provisional Application No. 60/268,473, filed on February 12, 2001, the entire contents of which are incorporated by reference.

Please delete paragraph [0011].

Please replace paragraph [0012] with the following:

[0012] Figures 5-12 illustrate call flows of the preferred embodiment.

Please replace paragraph [0070] with the following:

[0070] Finally, we present call flows for the above selected use cases. Now turning to figure 5, a call flow is shown for a user registering with a registrar. Step 1 - The user of MS1 performs some action -- powering up handset, activating some SIP-based service, etc. -- that requires the user to register with the SIP Registrar.

Please replace paragraph [0077] with the following:

[0077] Now turning to figure 6, a call flow is shown on Joining a Closed Group Session. As preconditions for this call flow, the following assumptions are made: another user (e.g., the user of MS2) has already joined closed group groupID1@operator.com; and the depicted PTT server has been allocated to serve groupID1@operator.com.

Please replace paragraph [0098] with the following:

[0098] Now turning to figure 7, a call flow is shown for a push-to-talk Call (or Talker Arbitration) for an already active group member. This call flow explains how an active group member places a group call. (An active member is one who has already joined the group session.) Note the efficiency of group call setup relative to conventional SIP-based telephony (which would require three SIP messages at a minimum exchanged with each member of the group). Having already indicated in the previous call flows the use of the Proxy-Require header, how the IMS proxy server authenticates/authorizes the user, and how the MS and the IMS proxy server compress SIP messages over the air, such details are omitted in this and subsequent call flows. Preconditions of this call flow include the following: three mobile users have already joined group groupID1, who relate per the peer-to-peer communication model; and the IMS proxy server has already cached profile & location information for all three users.

Please replace paragraph [0110] with the following:

[0110] Now continuing on to figure 8, Step 12 - The user releases the PTT button.

Please replace paragraph [0117] with the following:

[0117] Now turning to figure 9, a call flow is shown where a user leaves a closed group session. This call flow depicts a user leaving a closed group session that the user previously joined. Preconditions for this flow include the following: the IMS proxy server has already cached profile & location information for the user; and the IMS proxy server has already cached the IP address of the PTT server serving the groupID1.

Please replace paragraph [0125] with the following:

[0125] Now turning to figure 10, a call flow is shown for an alert-initiated, push-to-talk call. The following call flow depicts an alert-initiated Direct connect call involving three users, who comprise an ad hoc group. Both a call setup and a call teardown is shown. In addition to the preconditions identified for all call flows above, this flow specifically has the following preconditions: (1) all users have registered (as exemplified in figure 6); (2) the IMS proxy server has cached profile data and contact information for each user; (3) to expedite call setup for ad hoc group calls, each active PTT server has already registered with the Registrar a set of unique, ad hoc group URLs, with the contact for each URL being the PTT server's URL. Additionally, the host portion of the PTT server's URL includes the IP address of the PTT server, so as to eliminate the need to do a DNS query to resolve the server's address. These registrations will be needed to route all alerts/calls intended for users currently participating in an ad hoc group call to the PTT server supporting that call (in the event that a user participating in an ad hoc group call decides to join still another call, the PTT server supporting the original call must cause the user to leave the current call, lest RTP packets from both calls be delivered to the user and result in garbled speech); (4) moreover, at startup, the SIP Registrar established a permanent registration of pttserver@operator.com as a contact for the well known, generic, ad hoc group, groupadhoc@operator.com. This registration enables dynamic assignment of a PTT server for an ad hoc call. Further, the IMS proxy server has already cached the registered contacts (i.e., URLs of available PTT servers) for pttserver@operator.com.

releasing the PTT button on the mobile device;

transmitting a SIP SUBSCRIBE to release the speech token;

notifying the calling and called parties that the group's speech token is available.

REMARKS

These amendments were made in order to clarify the scope of the claimed invention. No office action has been received. These amendments were, therefore, not made for reasons relating to patentability.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned **"Version with Markings to Show Changes Made."**

Should the Examiner have any questions or comments regarding the amendment, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner For Patents, Washington, D.C. 20231

on March 28, 2002

Kathy Mattes

"Version with Markings to Show Changes Made."

IN THE SPECIFICATION:

Please replace paragraph [0012] with the following:

[0012] Figures [6]5-13 illustrate call flows of the preferred embodiment.

Please replace paragraph [0070] with the following:

[0070] Finally, we present call flows for the above selected use cases. Now turning to figure [6]5, a call flow is shown for a user registering with a registrar. Step 1 - The user of MS1 performs some action -- powering up handset, activating some SIP-based service, etc. -- that requires the user to register with the SIP Registrar.

Please replace paragraph [0077] with the following:

[0077] Now turning to figure [7]6, a call flow is shown on Joining a Closed Group Session. As preconditions for this call flow, the following assumptions are made: another user (e.g., the user of MS2) has already joined closed group groupID1@operator.com; and the depicted PTT server has been allocated to serve groupID1@operator.com.

Please replace paragraph [0098] with the following:

[0098] Now turning to figure [8]7, a call flow is shown for a push-to-talk Call (or Talker Arbitration) for an already active group member. This call flow explains how an active group member places a group call. (An active member is one who has already joined the group session.) Note the efficiency of group call setup relative to conventional SIP-based telephony (which would require three SIP messages at a minimum exchanged with each member of the group). Having already indicated in the previous call flows the use of the Proxy-Require header, how the IMS proxy server authenticates/authorizes the user, and how the MS and the IMS proxy server compress SIP messages over the air, such details are omitted in this and subsequent call flows. Preconditions of this call flow include the following: three mobile users have already

joined group groupID1, who relate per the peer-to-peer communication model; and the IMS proxy server has already cached profile & location information for all three users.

Please replace paragraph [0110] with the following:

[0110] Now continuing on to figure [9]8, Step 12 - The user releases the PTT button.

Please replace paragraph [0117] with the following:

[0117] Now turning to figure [10]9, a call flow is shown where a user leaves a closed group session. This call flow depicts a user leaving a closed group session that the user previously joined. Preconditions for this flow include the following: the IMS proxy server has already cached profile & location information for the user; and the IMS proxy server has already cached the IP address of the PTT server serving the groupID1.

Please replace paragraph [0125] with the following:

[0125] Now turning to figure [11]10, a call flow is shown for an alert-initiated, push-to-talk call. The following call flow depicts an alert-initiated Direct connect call involving three users, who comprise an ad hoc group. Both a call setup and a call teardown is shown. In addition to the preconditions identified for all call flows above, this flow specifically has the following preconditions: (1) all users have registered (as exemplified in figure 6); (2) the IMS proxy server has cached profile data and contact information for each user; (3) to expedite call setup for ad hoc group calls, each active PTT server has already registered with the Registrar a set of unique, ad hoc group URLs, with the contact for each URL being the PTT server's URL. Additionally, the host portion of the PTT server's URL includes the IP address of the PTT server, so as to eliminate the need to do a DNS query to resolve the server's address. These registrations will be needed to route all alerts/calls intended for users currently participating in an ad hoc group call to the PTT server supporting that call (in the event that a user participating in an ad hoc group call decides to join still another call, the PTT server supporting the original call must cause the user to leave the current call, lest RTP packets from both calls be delivered to the user and result in garbled speech); (4) moreover, at startup, the SIP Registrar established a permanent registration of pttserver@operator.com as a contact for the well known, generic, ad hoc group,

groupadhoc@operator.com. This registration enables dynamic assignment of a PTT server for an ad hoc call. Further, the IMS proxy server has already cached the registered contacts (i.e., URLs of available PTT servers) for pttserver@operator.com.